

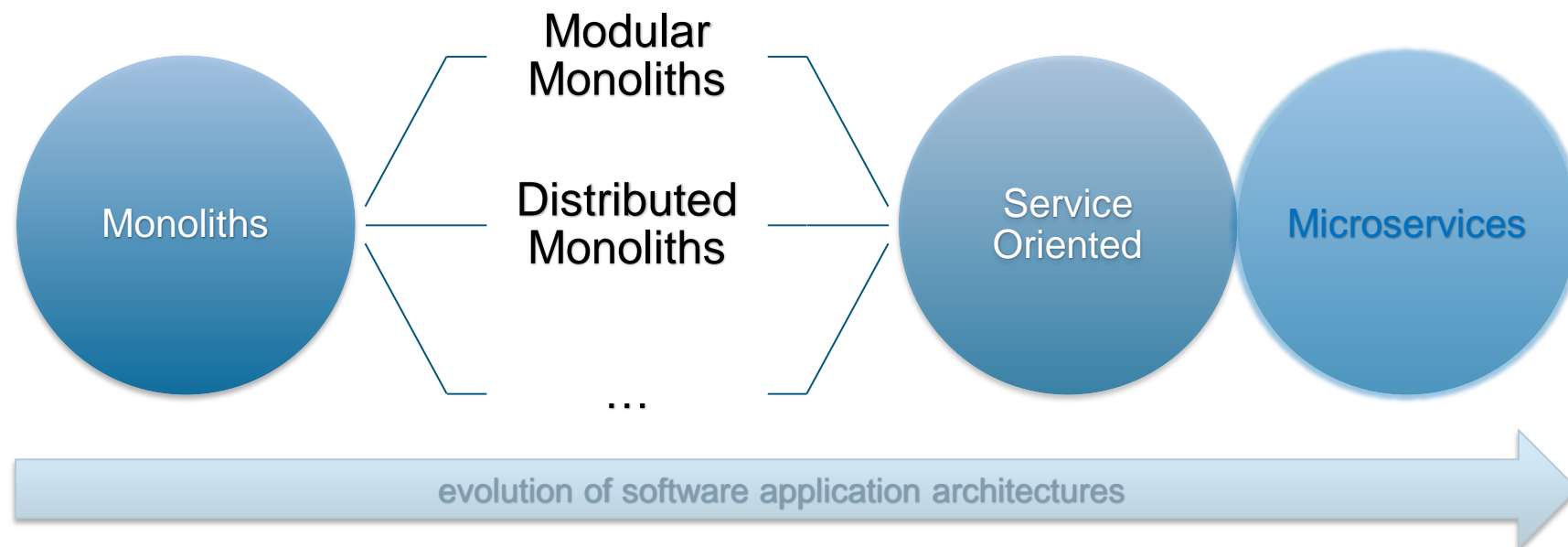
Microservices

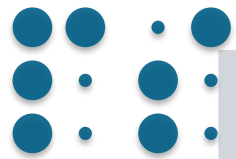
The good, and the not so good...

Ramesh Nagamalli,
Senior Key Expert, MOM Architecture & Innovation,
Siemens Digital Industries Software

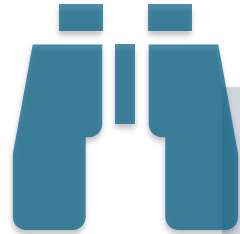
September 2, 2020

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Characteristics



Perspectives



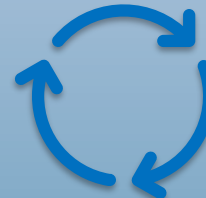
Lessons



Microservices are an **architectural style** for building distributed systems.



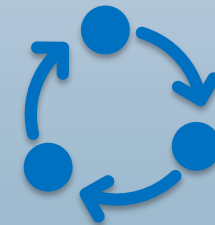
Microservices tackle the complexity of building **distributed systems**.



In Microservices architecture, software systems are composed of a suite of **independently deployable**, modular services

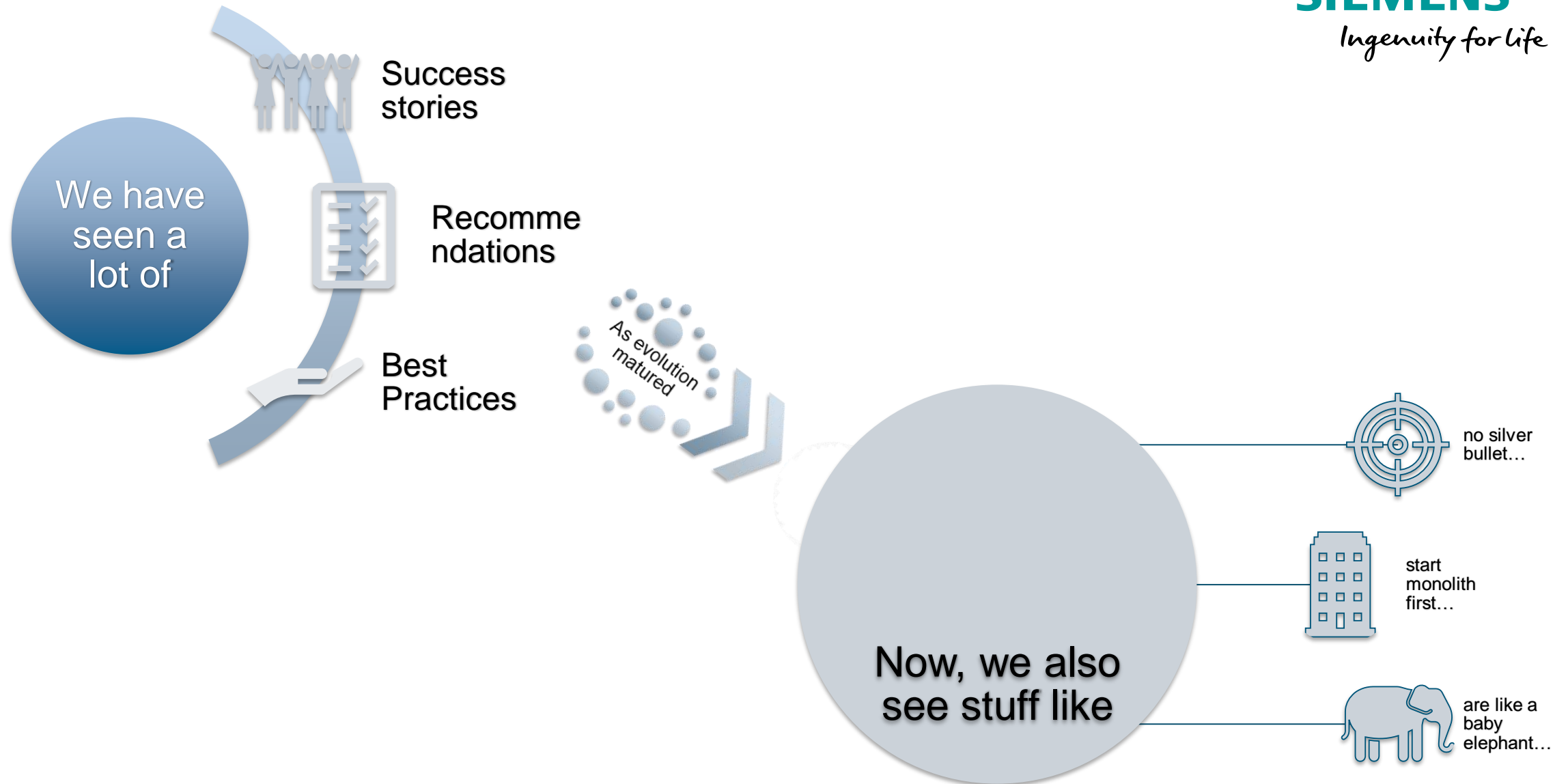


Microservices are built around a **business capability**



Microservices are **autonomous services** that work together

characteristics of microservices





well, how do we process all this?
what do we make out of it?



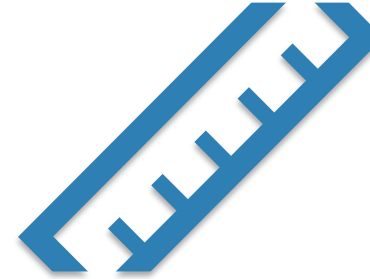
Isolation of
Failures



Fault
Tolerance



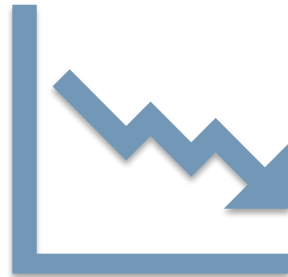
Resilience



Independent
Scalability



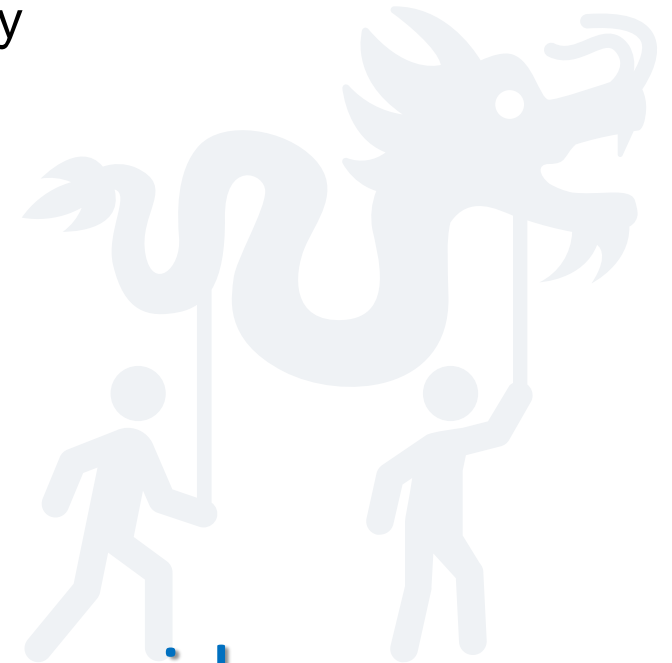
More Agility



Uses Less
Resources



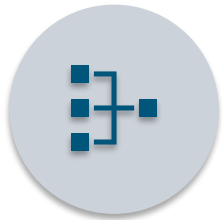
Increased
Productivity



as promised, Microservices do provide



however,
there's no
free lunch...



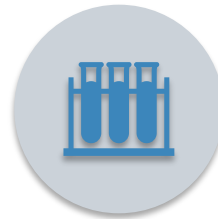
Network
Management



Data
Management



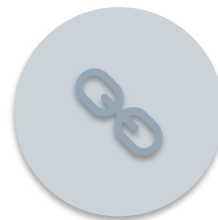
Source Code
Management



Integration
Testing

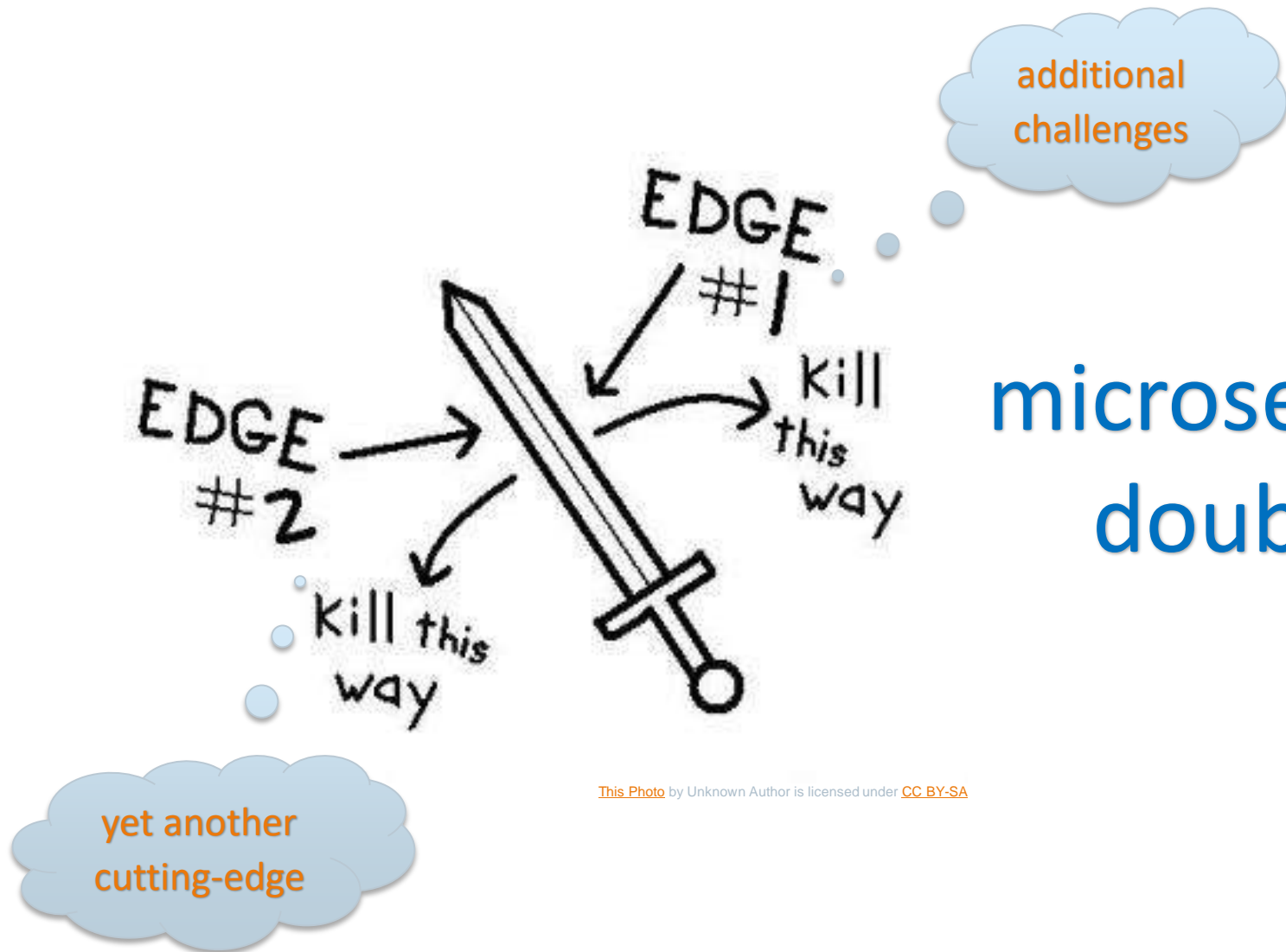


Monitoring and
Troubleshooting



Dependency
Management

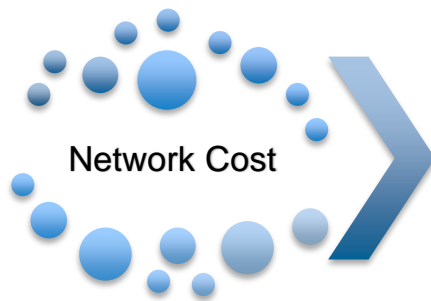
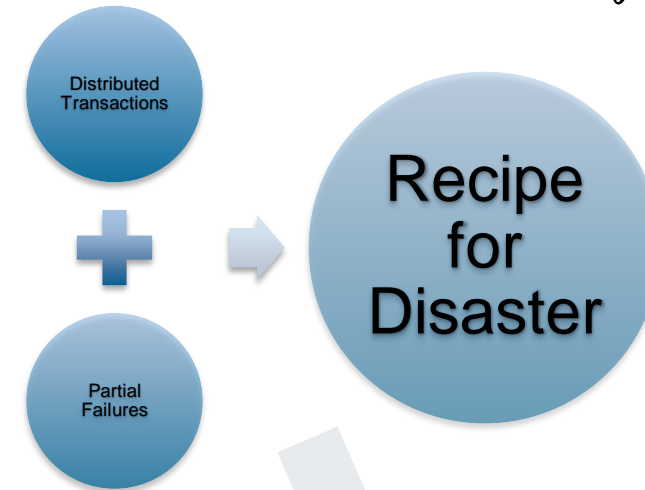
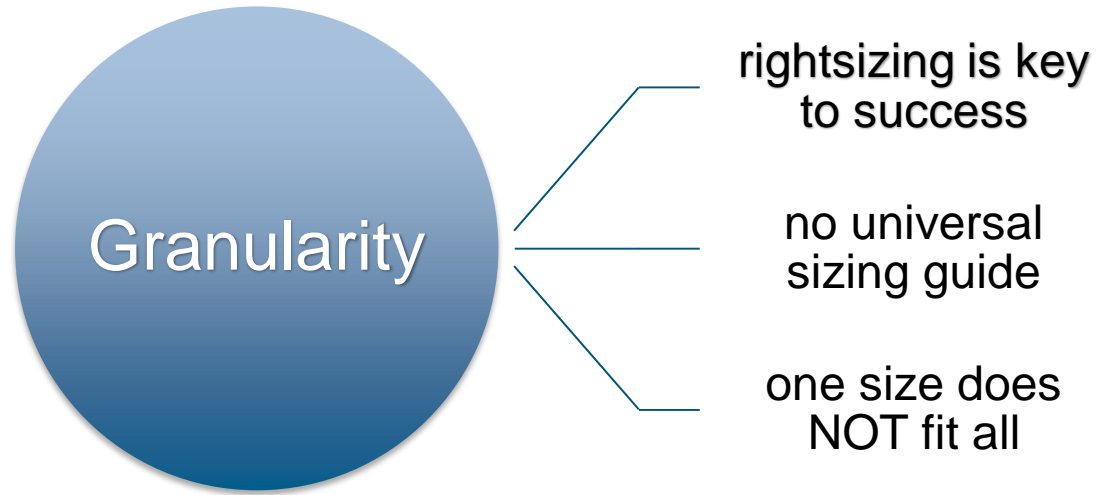
the price for the lunch
additional challenges



microservices, the modern
double edged sword*

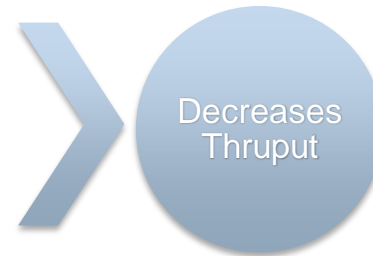
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*as most things

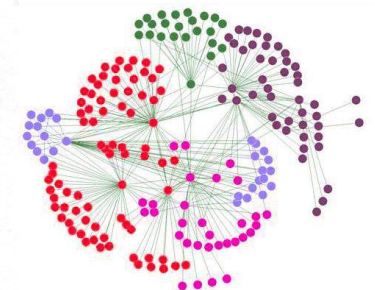


there's a pretty significant cost to having two processes communicate over a network

Latency



Main memory reference is about 100 nanoseconds, and a round trip within the same data center, is about 500 microseconds

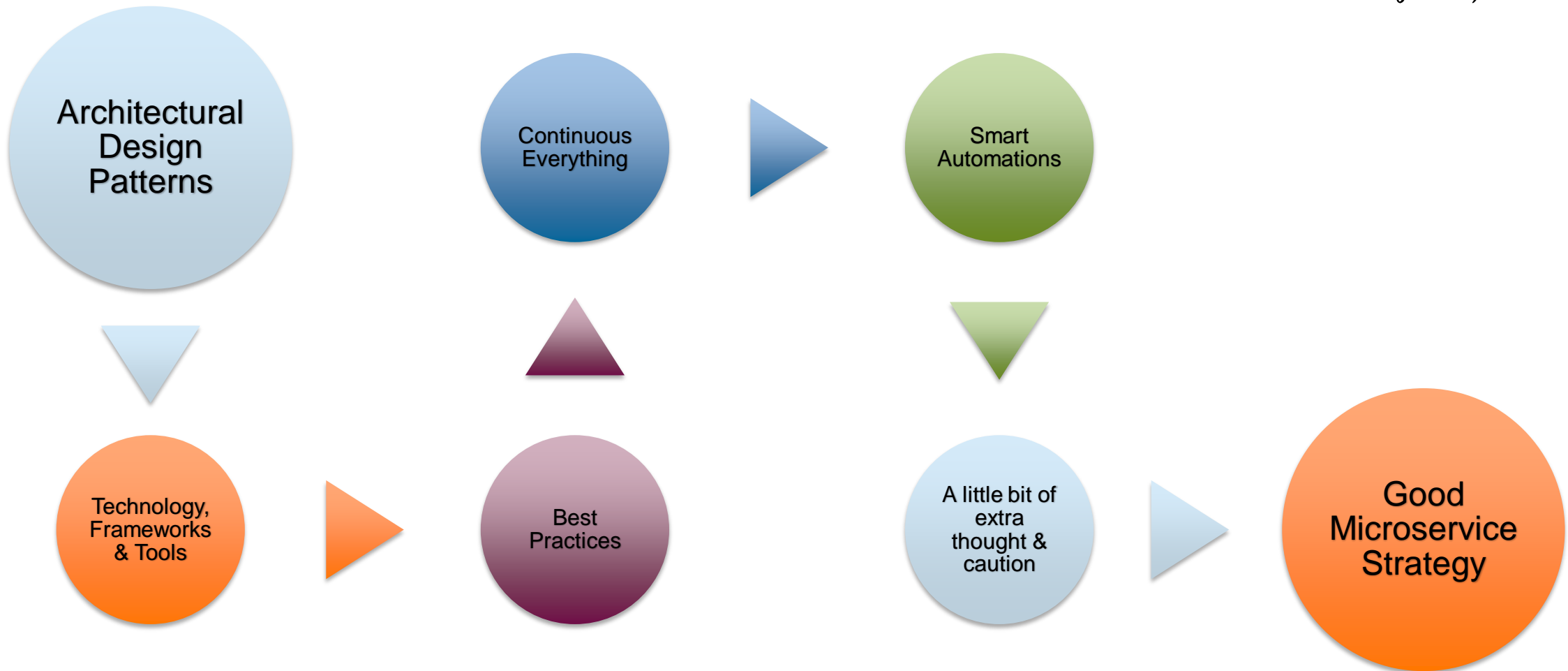


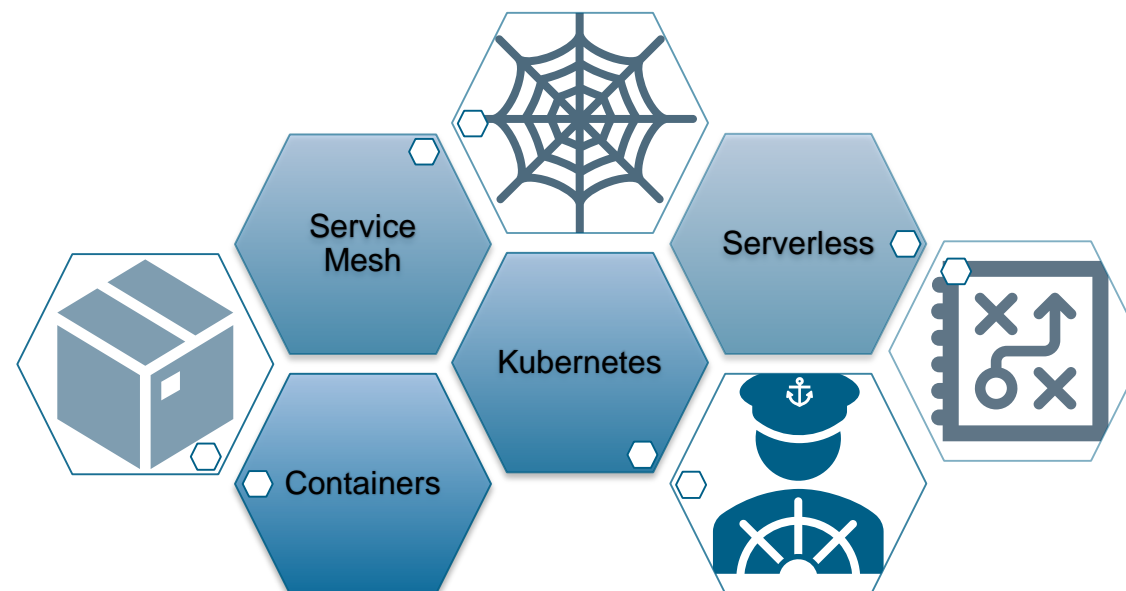
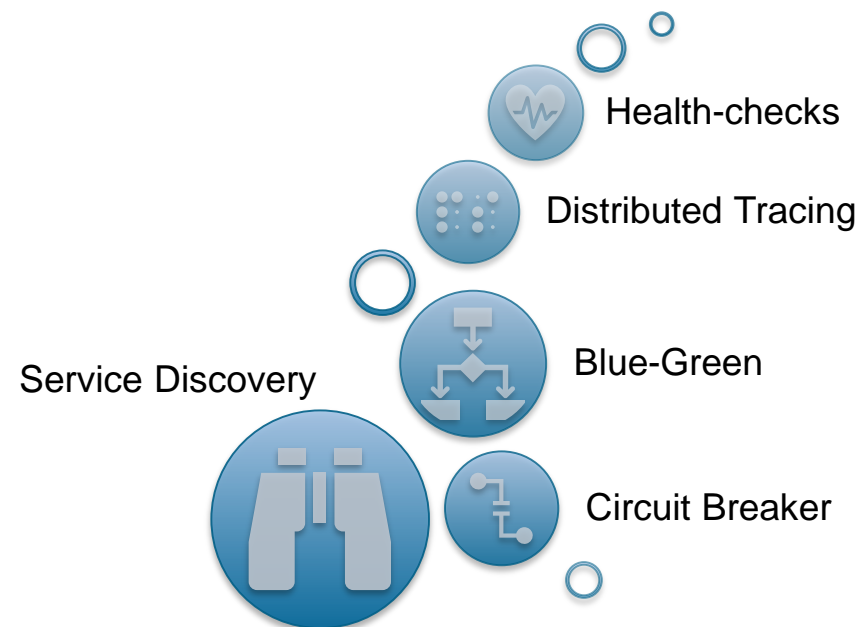
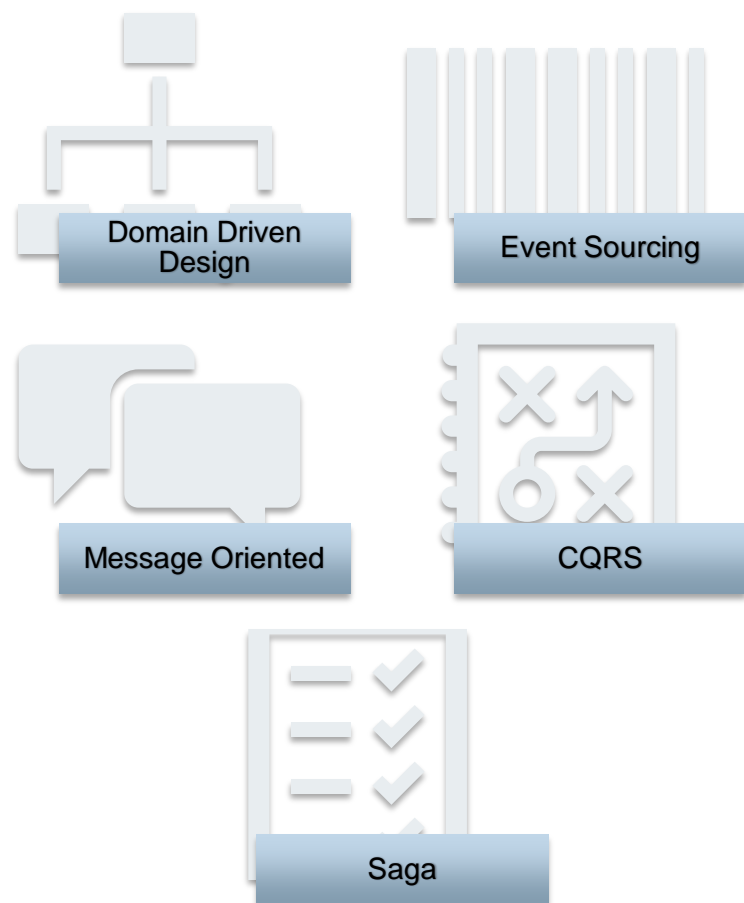
Operational Complexity

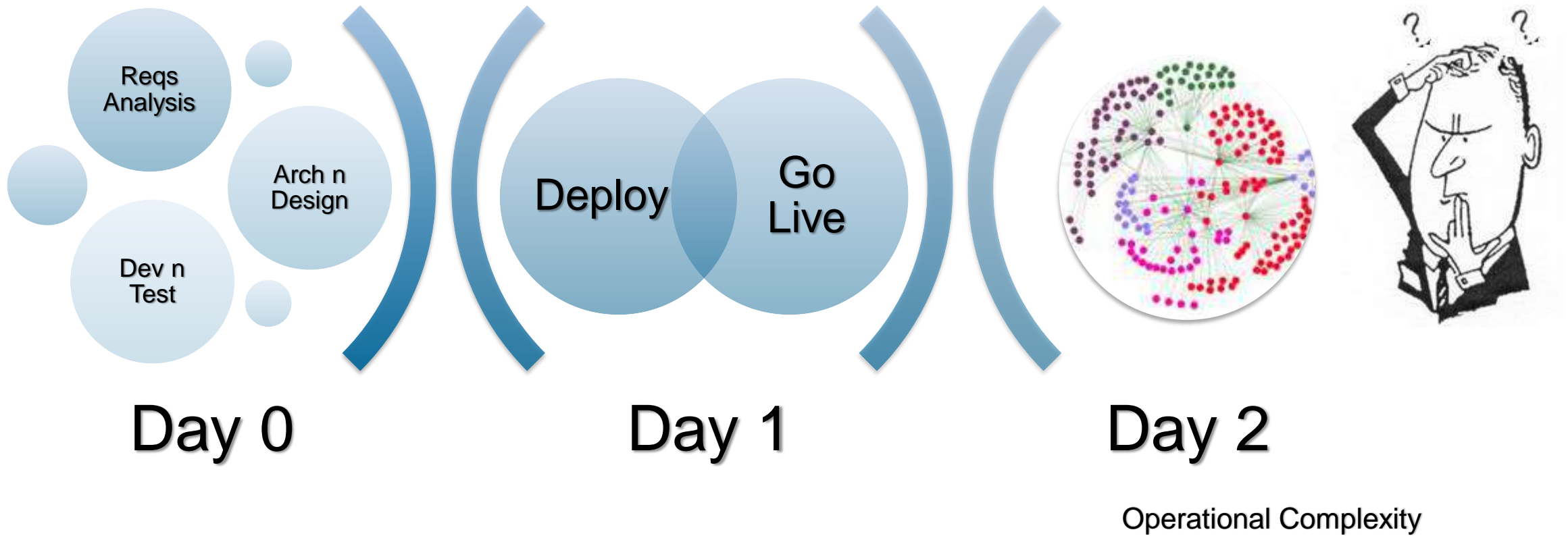
yet another cutting edge...

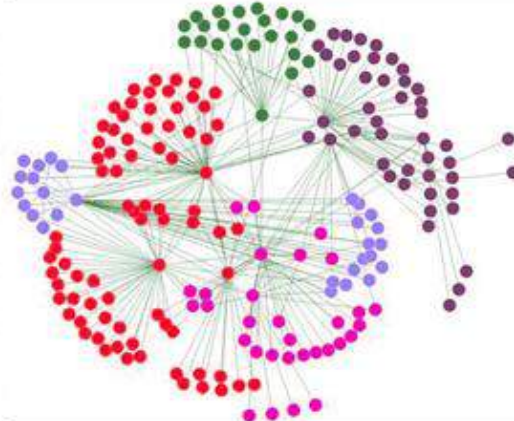
how do we deal with
all these challenges?





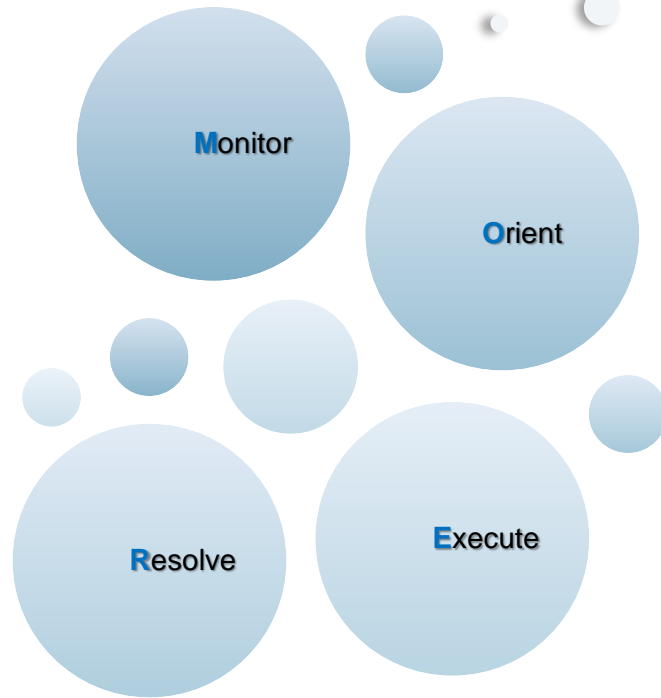






how do we handle
operational complexity?

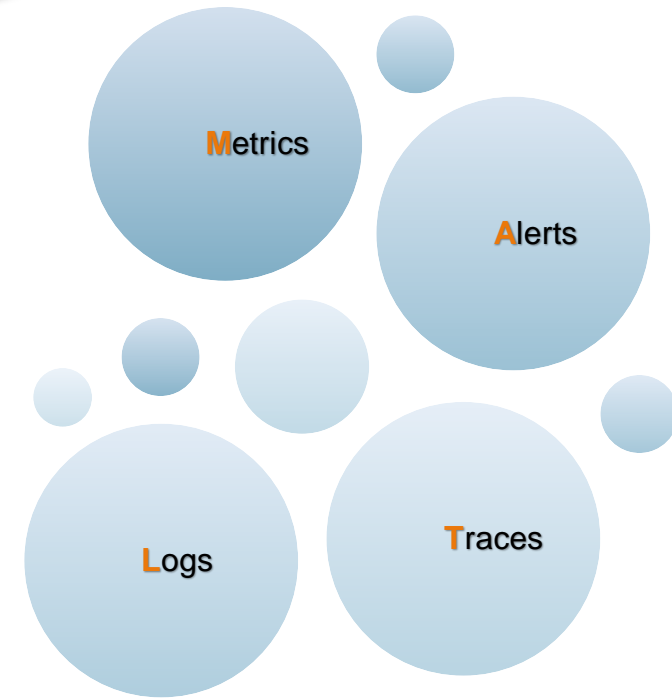
there is
M.O.R.E



Day 2 Operations

we need to be
black belt in
'observability' to
tackle distributed
systems operations

embrace **DevOps**
and the **cultural shift**



Observability

and, we need good-old
'**M.A.L.T**' for a strong
observability stack

Right sizing



Like in real life...***moderation is the key to betterment...***

Quotable Quote



"... if people can't build monoliths properly, microservices won't help" [Simon Brown](#)

loosely coupled you be should, not only appear



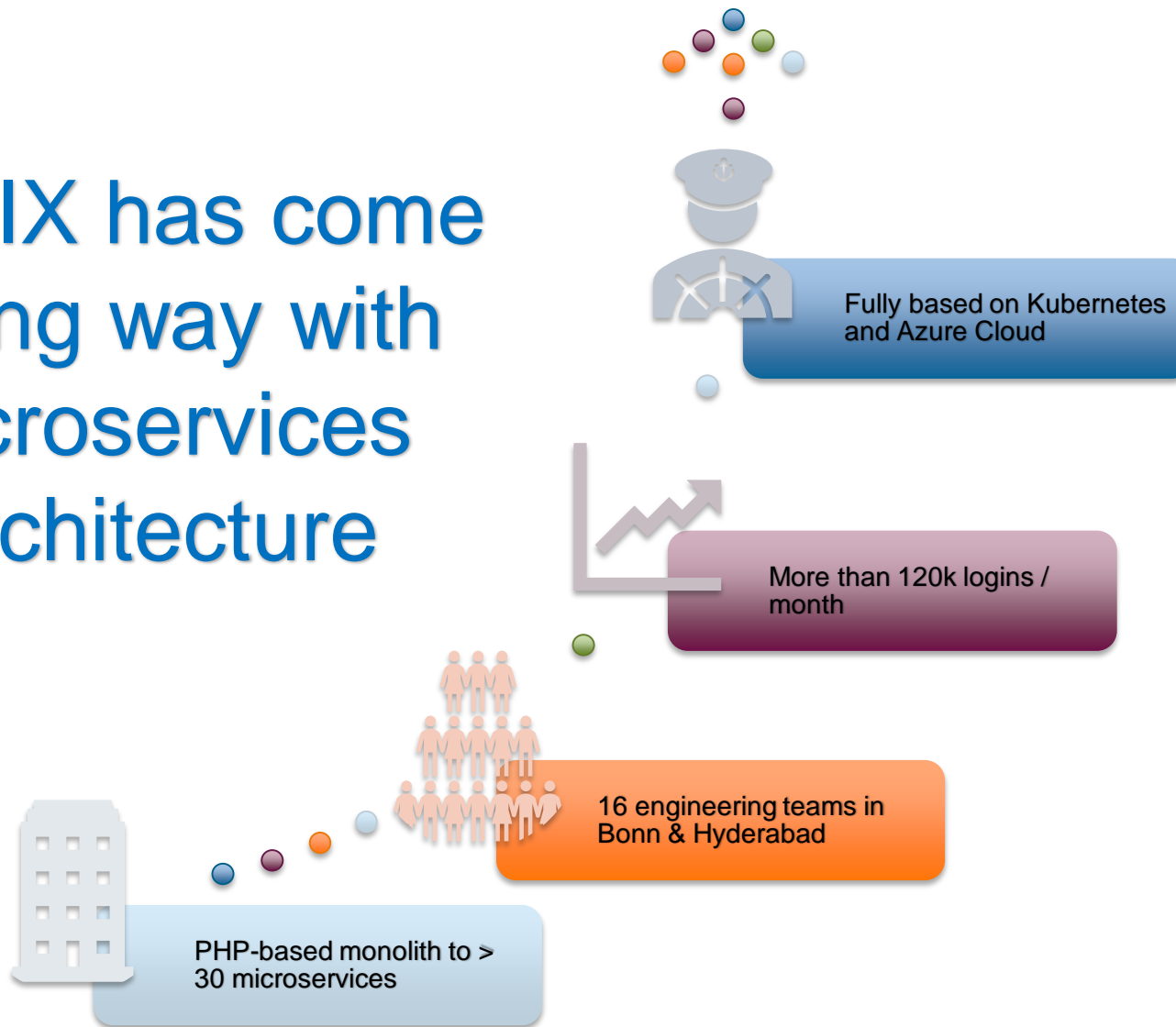
may the force be with you...

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LeanIX has come a long way with Microservices Architecture



Upcoming talk will share detailed learnings and outlooks that can for sure inspire larger environments as well...



Q&A

SIEMENS
Ingenuity for life



Ramesh Nagamalli

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